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Building & Highway Material Testing Laboratory

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T-2377

Job No.: CTCE/BBMP/W.No.05/GR/CSR-02/1064/CEMENT/2015-16 Date: 08.02.2016

TEST REPORT ON CEMENT

*** CUSTOMER**	:	**Asst. Executive Engineer**, Byatarayanapura Sub Division, BBMP, Bangalore.
***AGENCY**	:	**Mr. Gopi Reddy,** No.03, 1st Cross, 1st Main, Ramachandrappa Layout, Arebic College Post, Erannapalya, Bangalore – 560045.
***NAME OF THE WORK**	:	Improvements to Roads and Drains at Jakkur Village Left Side in Ward No.05, Byatarayanapura Sub Division, BBMP, Bangalore.
***REFERENCE**	:	EE/BTP/BBMP/E-PMT/203/2015-16 Dated: 05.02.2016
SAMPLE ID	:	Cement – Sample 1
SAMPLE RECEIVED ON	:	05.02.2016
PERIOD OF TESTING	:	05.02.2016 to 08.02.2016

The results of the tests conducted on the cement sample are as follows:

Sl. No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-2013
1	Standard Consistency	IS-4031 (Part -4) 1988(RA-2009)	28.00 %	-
2	a) Initial Setting Time	IS-4031 (Part -5) 1988(RA-2009)	145 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5) 1988(RA-2009)	490 Minutes	Not More than 600 Minutes
3	Soundness by Le Chartlier Method	IS-4031 (Part-3) 1988(RA-2009)	1 mm	Not more than 10mm

*Information is furnished by the Customer/Representative.

Note:

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⇒ Any Query regarding the report must be reported within 30 days from the date of testing.

****

VISHWANATH .C
Quality Manager

AE-05
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Job No.: CTCE/BBMP/W.No.05/GR/CSR-02/1064/SAND-Gradation/2015-16 : 08.02.2016

TEST REPORT ON DETERMINATION GRADATION OF FINE AGGREGATES

*** Customer** : **Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.

*** Agency** : **Mr. Gopi Reddy,**
No.03, 1st Cross, 1st Main, Ramachandrappa Layout, Arebic College Post, Erannapalya, Bangalore – 560045.

*** Name of Work** : Improvements to Roads and Drains at Jakkur Village Left Side in Ward No.05, Byatarayanapura Sub Division, BBMP, Bangalore.

Reference : EE/BTP/BBMP/E-PMT/203/2015-16 Dated: 05.02.2016

Technical Reference : IS : 2386 Part 1 - 1963 RA-2007

Sample ID : Fine Aggregates – Sample 1

Sample Received on : 05.02.2016

Date of Testing : 08.02.2016

Total Wt. of Aggregates in gms **1000**

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2007)			
		Zone-I	Zone-II	Zone-III	Zone-IV
10	100	100	100	100	100
4.75	96.10	90-100	90-100	90-100	95-100
2.36	78.60	60-95	75-100	85-100	95-100
1.18	58.60	30-70	55-90	75-100	90-100
600 Micron	32.10	15-34	35-59	60-79	80-100
300 Micron	13.90	5-20	8-30	12-40	15-50
150 Micron	6.00	0-10	0-10	0-10	0-15

* Information is furnished by the Customer/Representative

Remarks : This sample is under Zone-I specific limits.

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Quality Manager

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Job No.: CTCE/BBMP/W.No.05/GR/CSR-02/1064/AGG/GR/2015-16 : 08.02.2016

TEST REPORT ON DETERMINATION GRADATION OF COARSE AGGREGATES

*** Customer** : **Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.

*** Agency** : **Mr. Gopi Reddy,**
No.03, 1st Cross, 1st Main, Ramachandrappa Layout, Arebic College Post, Erannapalya, Bangalore – 560045.

*** Name of Work** : Improvements to Roads and Drains at Jakkur Village Left Side in Ward No.05, Byatarayanapura Sub Division, BBMP, Bangalore.

Reference : EE/BTP/BBMP/E-PMT/203/2015-16 Dated: 05.02.2016

Technical Reference : IS : 2386 Part 1 -1963 RA-2007

Sample ID : Coarse Aggregates (40mm) – Sample 1

Sample Received on : 05.02.2016

Date of Testing : 08.02.2016

Total Wt. of Aggregates in gms= **10000**

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2007)	
		Graded	Single Sized
80	100	100	-
63	100	-	100
40	97.10	95-100	85-100
20	44.00	30-70	0-20
10	19.90	10-35	0-5
4.75	2.40	0-5	-

* Information is furnished by the Customer/Representative

Remarks : This sample is under Graded specific limits.

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AE-05

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Job No.: CTCE/BBMP/W.No.05/GR /STEEL/2015-16 08.02.2016

TEST REPORT ON REINFORCEMENT STEEL

Client	:	**Asst. Executive Engineer**, Byatarayanapura Sub Division, BBMP, Bangalore.
Agency	:	**Mr. Gopi Reddy,** No.03, 1st Cross, 1st Main, Ramachandrappa Layout, Arebic College Post, Erannapalya, Bangalore – 560045.
Name of the work	:	Improvements to Roads and Drains at Jakkur Village Left Side in Ward No.05, Byatarayanapura Sub Division, BBMP, Bangalore.
Reference	:	EE/BTP/BBMP/E-PMT/203/2015-16 Dated: 05.02.2016
Date of Test	:	08.02.2016
Technical Reference	:	IS: 1786-2008

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm²	Tensile strength (Ultimate stress) N/mm²	Elongation percent gauge length		
1	10	0.62	516	556	13.20	O.K	O.K

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Job No.: CTCE/BBMP/W.No.05/GR/WMM/Gradation/2015-16

11.02.2016

GRADATION FOR WMM
MORTH TABLE-400-11

Client : **Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.

Agency : **Mr. Gopi Reddy,**
No.03, 1st Cross, 1st Main, Ramachandrappa Layout, Arebic College Post, Erannapalya, Bangalore – 560045.

Name of Work : Improvements to Roads and Drains at Jakkur Village Left Side in Ward No.05, Byatarayanapura Sub Division, BBMP, Bangalore.

Reference : EE/BTP/BBMP/E-PMT/203/2015-16 Dated: 05.02.2016

Date of Testing : 11.02.2016

Material : WMM

Sample Location : WMM Mix Plant

Oven Dry Wt (gm): **8025**

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	260	260	3.2	96.8	95-100
22.4	2585	2845	35.5	64.5	60-80
11.2	1295	4140	51.6	48.4	40-60
4.75	1105	5245	65.4	34.6	25-40
2.36	1195	6440	80.2	19.8	15-30
0.600	685	7125	88.8	11.2	8-22
0.075	515	7640	95.2	4.8	0-8

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Job No.: CTCE/BBMP/W.No.05/GR/WMM/AIV/2015-16

11.02.2016

Aggregate Impact Value

IS: 2386 Part IV

Client	**Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.
Agency	**Mr. Gopi Reddy,** No.03, 1st Cross, 1st Main, Ramachandrappa Layout, Arebic College Post, Erannapalya, Bangalore – 560045.
Name of the Work	Improvements to Roads and Drains at Jakkur Village Left Side in Ward No.05, Byatarayanapura Sub Division, BBMP, Bangalore.
Reference	EE/BTP/BBMP/E-PMT/203/2015-16 Dated: 05.02.2016
Source / Location	WMM Plant
Type of Mix	Wet Mix macadam
Date of Testing	11.02.2016

Sl No.	Details	Trial No. 1	Trial No. 2	Average
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	388	389	
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	86	87	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	302	302	
4	Aggregate Impact value = percent fines	22.16	22.37	
	100* (W_2/W_1)%			**22.26**

Comments:

→ Maximum allowable Aggregate Impact value for Wet mix Macadam is 30%

Note:

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Job No.: CTCE/BBMP/W.No.05/GR/WMM/S-T/2015-16 11.02.2016

DETERMINATION OF FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

Client	**Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.
Agency	**Mr. Gopi Reddy,** No.03, 1st Cross, 1st Main, Ramachandrappa Layout, Arebic College Post, Erannapalya, Bangalore – 560045.
Name of Work	Improvements to Roads and Drains at Jakkur Village Left Side in Ward No.05, Byatarayanapura Sub Division, BBMP, Bangalore.
Reference	EE/BTP/BBMP/E-PMT/203/2015-16 Dated: 05.02.2016
Technical Reference	IS 2386(Part 1) 1963 (RA 2011)
Type of Mix	Wet Mix Macadam
Date of Testing	11.02.2016

Result : Flakiness Index = **11.85%**

Elongation Index = **13.98%**

Result : Combined Flakiness & Elongation index 25.83%

Comments:

Maximum allowable Flakiness & Elongation Index for Wet Mix Macadam is 30%

Note:

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Job No.: CTCE/BBMP/W.No.05/GR/SDBC/AIV/2015-16 10.03.2016

Aggregate Impact Value

IS: 2386 Part IV

Client	**Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.
Agency	**Mr. Gopi Reddy,** No.03, 1st Cross, 1st Main, Ramachandrappa Layout, Arebic College Post, Erannapalya, Bangalore – 560045.
Name of the Work	Improvements to Roads and Drains at Jakkur Village Left Side in Ward No.05, Byatarayanapura Sub Division, BBMP, Bangalore.
Reference	EE/BTP/BBMP/E-PMT/203/2015-16 Dated: 05.02.2016
Source / Location	Hot Mix Plant, Bangalore
Type of Mix	Semi Dense Bituminous Concrete
Date of Testing	10.03.2016

Sl No.	Details	Trial No. 1	Trial No. 2	Average
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	388	389	
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	85	86	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	303	303	
4	Aggregate Impact value = percent fines 100* (W_2/W_1)%	21.91	22.11	**22.01**

Comments:

→ Maximum allowable Aggregate Impact value for Semi Dense Bituminous Concrete is 27%

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Job No.: CTCE/BBMP/W.No.05/GR/SDBC/Shape_T/2015-16 : 10.03.2016

DETERMINATION OF FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

Client	: **Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.
Agency	: **Mr. Gopi Reddy,** No.03, 1st Cross, 1st Main, Ramachandrappa Layout, Arebic College Post, Erannapalya, Bangalore – 560045.
Name of Work	: Improvements to Roads and Drains at Jakkur Village Left Side in Ward No.05, Byatarayanapura Sub Division, BBMP, Bangalore.
Reference	: EE/BTP/BBMP/E-PMT/203/2015-16 Dated: 05.02.2016
Technical Reference	: IS 2386(Part 1) 1963 (RA 2007)
Type of Mix	: Semi Dense Bituminous Concrete
Date of Testing	: 10.03.2016

Result : Flakiness Index = **11.25%**

Elongation Index = **13.85%**

Result : Combined Flakiness & Elongation index **25.10%**

Comments:

Maximum allowable Flakiness & Elongation Index for Semi Dense Bituminous Concrete is 30%

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Job No.: CTCE/BBMP/W.No.05/GR/SDBC/Stripping/2015-16 10.03.2016

Stripping Value of Road Aggregates (Static Immersion Test)

IS: 6241

Client	**Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.
Agency	**Mr. Gopi Reddy,** No.03, 1st Cross, 1st Main, Ramachandrappa Layout, Arebic College Post, Erannapalya, Bangalore – 560045.
Name of the work	Improvements to Roads and Drains at Jakkur Village Left Side in Ward No.05, Byatarayanapura Sub Division, BBMP, Bangalore.
Reference	EE/BTP/BBMP/E-PMT/203/2015-16 Dated: 05.02.2016
Type of Mix	Semi Dense Bituminous Concrete
Date of Testing	10.03.2016

Type of binder : 80/100
Percentage of binder used : 5.0% by wt.
Total weight of aggregate : 200 g
Total weight of binder : 10.0 g
Temperature of water-bath : 40° C

Observation Number	Stripping, Percentage	Average, Percentage	Average Retained Coating, %
1	3.3	3.40	96.60
2	3.4		
3	3.5		

Comments:

→ Minimum allowable Aggregate retained coating for Semi Dense Bituminous Concrete is 95%

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Job No.: CTCE/BBMP/W.No.05/GR/SDBC/Sp_Wa/2015-16

10.03.2016

Specific Gravity And Water Absorption Test

IS: 2386 Part III

Client	**Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.
Agency	**Mr. Gopi Reddy,** No.03, 1st Cross, 1st Main, Ramachandrappa Layout, Arebic College Post, Erannapalya, Bangalore – 560045.
Name of the Work	Improvements to Roads and Drains at Jakkur Village Left Side in Ward No.05, Byatarayanapura Sub Division, BBMP, Bangalore.
Reference	EE/BTP/BBMP/E-PMT/203/2015-16 Dated: 05.02.2016
Type of Mix	Semi Dense Bituminous Concrete
Source / Location	Hotmix Plant, Bangalore
Date of Testing	10.03.2016

Sl. No.	Details	Notation	Test Number			Mean Value
			Test 1	Test 2	Test 3	
1	Weight of aggregate suspended in water with the basket	W_1 g	2023	2024	2025	
2	Weight of basket suspended in water	W_2 g	755	2020	755	
3	Weight of saturated aggregate in water	$(W_1 - W_2) = W_s$ g	1268	1269	1270	
4	Weight of saturated surface dry aggregate in air	W_3 g	2020	2021	2022	
5	Weight of water equal to the volume of the aggregate	$(W_3 - W_S)$ g	752	752	752	
6	Weight of oven dried aggregate	W_4 g	2008	2006	2010	
7	Specific Gravity	$W_4/(W_3-W_S)$	2.670	2.668	2.673	2.670
8	Apparent Specific gravity	$W_4/(W_4-W_S)$	2.714	2.722	2.716	2.717
9	Water Absorption	$((W_3-W_4)*100)/W_4$	0.60%	0.75%	0.60%	0.65%

Comments:

→ Maximum allowable Aggregate Water absorption value for Semi Dense Bituminous Concrete is 2.0%

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E-mail : vishwanath.ia@civiltechconsultants.com / info@civiltechconsultants.com

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Job No.: CTCE/BBMP/W.No.05/GR/SDBC/Bitumen/2015-16 10.03.2016

BITUMEN CONTENT AND GRADATION DETERMINATION OF SEMI DENSE BITUMINOUS CONCRETE MIX

As per IS2386 and IRC:SP:11-1984

Client	**Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.
AGENCY	**Mr. Gopi Reddy,** No.03, 1st Cross, 1st Main, Ramachandrappa Layout, Arebic College Post, Erannapalya, Bangalore – 560045.
NAME OF THE WORK	Improvements to Roads and Drains at Jakkur Village Left Side in Ward No.05, Byatarayanapura Sub Division, BBMP, Bangalore.
REFERENCE	EE/BTP/BBMP/E-PMT/203/2015-16 Dated: 05.02.2016
SAMPLE I/D	Roads in Jakkur village in Ward No.05, BBMP, Bangalore.
DATE OF TESTING	10.03.2016

BITUMEN CONTENT DETERMINATION

Description	Trail 1	Trail 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	473.5	475.5
3. Weight of Asphalt and Mineral matter Extracted,	-	-
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	26.5	24.50
7. Bitumen content in %	5.30	4.90
8. Average	**5.10**	

GRADATION AFTER EXTRACTION

SIEVE SIZE	Trail 1				JOBMIX
mm	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	Gradation
13.2	0	0	0	100	100
9.5	32.65	6.90	6.90	93.10	90-100
4.75	245.5	51.85	58.74	41.26	35-51
2.36	39.65	8.37	67.12	32.88	24-39
1.18	43.36	9.16	76.27	23.73	15-30
0.3	45.25	9.56	85.83	14.17	9-19
0.075	32.26	6.81	92.64	7.36	3-8

SIEVE SIZE	Trail 2				JOBMIX
mm	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	Gradation
13.2	0	0	0	100	100
9.5	30.28	6.06	6.06	93.94	90-100
4.75	258.3	51.66	57.72	42.28	35-51
2.36	54.25	10.85	68.57	31.43	24-39
1.18	44.25	8.85	77.42	22.58	15-30
0.3	35.26	7.05	84.47	15.53	9-19
0.075	38.59	7.72	92.19	7.81	3-8

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NABL - Accredited Laboratory as per ISO / IEC-17025 :2005

T-2377

Job No.: CTCE/BBMP/W.No.05/GR/CSR-02/1064/CUBE/2015-16 17.03.2016

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

***Customer** : **Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.

***Agency** : **Mr. Gopi Reddy,**
No.03, 1st Cross, 1st Main, Ramachandrappa Layout, Arebic College Post, Erannapalya, Bangalore – 560045.

***Name of the work** : Improvements to Roads and Drains at Jakkur Village Left Side in Ward No.05, Byatarayanapura Sub Division, BBMP, Bangalore.

***Reference** : EE/BTP/BBMP/E-PMT/203/2015-16 Dated: 05.02.2016

Sample ID : Covering Slab Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

*** Grade of Concrete** : M_{20}

Compressive Strength as on : 28th day

Sample Received on : 17.03.2016

Sl.No.	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	18.02.2016	17.03.2016	8.125	475.5	21.13
2	18.02.2016	17.03.2016	8.256	495.6	22.03
3	18.02.2016	17.03.2016	8.325	512.3	22.77

*Information is furnished by the Customer/Representative.

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***Name of the work** : Improvements to Roads and Drains at Jakkur Village Left Side in Ward No.05, Byatarayanapura Sub Division, BBMP, Bangalore.

***Reference** : EE/BTP/BBMP/E-PMT/203/2015-16 Dated: 05.02.2016

Sample ID : Pavement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

*** Grade of Concrete** : M_{20}

Compressive Strength as on : 28th day

Sample Received on : 19.03.2016

Sl.No.	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	20.02.2016	19.03.2016	8.110	482.9	21.46
2	20.02.2016	19.03.2016	8.289	498.5	22.16
3	20.02.2016	19.03.2016	8.335	515.5	22.91

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***Customer** : **Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.

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***Name of the work** : Improvements to Roads and Drains at Jakkur Village Left Side in Ward No.05, Byatarayanapura Sub Division, BBMP, Bangalore.

***Reference** : EE/BTP/BBMP/E-PMT/203/2015-16 Dated: 05.02.2016

Sample ID : Pavement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

*** Grade of Concrete** : M_{20}

Compressive Strength as on : 28th day

Sample Received on : 19.03.2016

Sl.No.	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	20.02.2016	19.03.2016	8.189	478.3	21.26
2	20.02.2016	19.03.2016	8.269	510.3	22.68
3	20.02.2016	19.03.2016	8.374	526.5	23.40

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***Name of the work**	: Improvements to Roads and Drains at Jakkur Village Left Side in Ward No.05, Byatarayanapura Sub Division, BBMP, Bangalore.
***Reference**	: EE/BTP/BBMP/E-PMT/203/2015-16 Dated: 05.02.2016
Sample ID	: Pavement Concrete
Size of cubes	: 150mmx150mmx150mm
Cross Sectional Area	: 22500 mm^2
Technical Reference	: IS: 516-1959 (Reaffirmed 2008)
*** Grade of Concrete**	: M_{20}
Compressive Strength as on	: 28th day
Sample Received on	: 19.03.2016

Sl.No.	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	20.02.2016	19.03.2016	8.097	476.6	21.18
2	20.02.2016	19.03.2016	8.158	493.5	21.93
3	20.02.2016	19.03.2016	8.288	510.9	22.71

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***Reference** : EE/BTP/BBMP/E-PMT/203/2015-16 Dated: 05.02.2016

Sample ID : Pavement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

*** Grade of Concrete** : M_{20}

Compressive Strength as on : 28th day

Sample Received on : 20.03.2016

Sl.No.	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	21.02.2016	20.03.2016	8.125	485.5	21.58
2	21.02.2016	20.03.2016	8.256	495.5	22.02
3	21.02.2016	20.03.2016	8.322	510.2	22.68

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***Reference** : EE/BTP/BBMP/E-PMT/203/2015-16 Dated: 05.02.2016

Sample ID : Pavement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

*** Grade of Concrete** : M_{20}

Compressive Strength as on : 28th day

Sample Received on : 20.03.2016

Sl.No.	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	21.02.2016	20.03.2016	8.182	475.5	21.13
2	21.02.2016	20.03.2016	8.297	505.2	22.45
3	21.02.2016	20.03.2016	8.385	518.3	23.04

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Job No.: CTCE/BBMP/W.No.05/GR/CSR-02/1064/CUBE/2015-16 14.03.2016

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

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***Name of the work**	: Improvements to Roads and Drains at Jakkur Village Left Side in Ward No.05, Byatarayanapura Sub Division, BBMP, Bangalore.
***Reference**	: EE/BTP/BBMP/E-PMT/203/2015-16 Dated: 05.02.2016
Sample ID	: Pavement Concrete
Size of cubes	: 150mmx150mmx150mm
Cross Sectional Area	: 22500 mm^2
Technical Reference	: IS: 516-1959 (Reaffirmed 2008)
*** Grade of Concrete**	: M_{15}
Compressive Strength as on	: 28th day
Sample Received on	: 14.03.2016

Sl.No.	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	15.02.2016	14.03.2016	8.135	352.6	15.67
2	15.02.2016	14.03.2016	8.290	365.3	16.24
3	15.02.2016	14.03.2016	8.335	378.6	16.83

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